

We claim

1. A method for manufacturing a compound construction element in an extrusion process, comprising pressing a composite material through an extrusion die,

a) which composite material comprises a matrix of thermoplastic synthetic material and wood particles or other, cellulose-containing particles in an amount of at least 50 % by weight, and

b) one or more elongated additional elements, which additional elements are brought into tight engagement with the composite material to form an initial compound element, thereafter shaping the initial compound element to form the desired compound construction element in a die.

2. The method according to Claim 1, wherein the compound element is cooled during shaping in the die.

3. The method according to Claim 1, wherein the content of wood particles or other, cellulose containing particles is between approximately 50-80 % by weight.

4. The method according to Claim 1, wherein the content of wood particles or other cellulose containing particles is between approximately 70-80 % by weight.

5. The method according to Claim 1, wherein the composite material after cooling has an E-modulus of more than approximately 6000 MPa.

6. The method according to Claim 1, wherein the composite material after cooling has an E-modulus of approximately 6000-12000 Mpa.

7. The method according to Claim 1, wherein the composite material after cooling has an E-modulus of approximately 7000-9000 MPa.

8. The method according to Claim 1, wherein the additional elements form reinforcement elements.

9. The method according to Claim 1, wherein the additional elements form reinforcement elements which when supplied are bendable in longitudinal direction and are kept taut.

10. The method according to Claim 8, wherein the reinforcement elements have a substantially round cross-section.

11. The method according to Claim 8, wherein the reinforcement elements have a non-round cross-section.

12. The method according to Claim 8, wherein the reinforcement elements have a flat or strip-shaped cross section.

13. The method according to Claim 8, wherein the additional elements are made of metal.

14. The method according to Claim 8, wherein the additional elements are made of steel.

15. The method according to Claim 1, wherein the additional elements are made of synthetic material.

16. The method according to Claim 1, wherein the additional elements are made of synthetic material, natural fibres, yarn or synthetic fibres.

17. The method according to Claim 16, wherein the additional elements are members selected from the group consisting of sisal, hemp, glass, carbon, aramid and mixtures thereof.

18. The method according to Claim 1, wherein the additional elements comprise one or more additional elements which, in the longitudinal direction, are rigid and/or buckle/bend rigid.

19. The method according to Claim 1, wherein the additional elements are profile-shaped in transverse cross-section.

20. The method according to Claim 18, wherein the additional elements are tubular or u-profile= shaped in transverse cross-section.

21. The method according to Claim 18, wherein the rigid additional element is made of wood.

22. The method according to Claim 18, wherein the wood particles or other, cellulose-containing particles are in fibre form.

23. The method according to Claim 22, wherein the fibres comprise a fraction of longer fibres, wherein said longer fibres are substantially oriented in the extrusion direction.

24. The method according to Claim 1, wherein the thermoplastic synthetic material is selected from the group consisting of polyolefin, pvc and polycarbonate.

25. The method according to Claim 24, wherein the thermoplastic synthetic material is selected from the group consisting of polyethylene and polypropylene,

26. The method according to Claim 1, wherein the wood particles or other, cellulose-containing particles when added to the thermoplastic synthetic material have a moisture content of less than approximately 1 % by weight.

27. The method according to Claim 1, wherein the additional elements are entirely enveloped by the composite material.

28. The method according to Claim 1, wherein the construction element has the shape of an I-profile, H-profile or another profile comprising a body and legs or arms that are protruding therefrom.

29. The method according to Claim 1, wherein the construction element has the shape of a tubular profile.

30. An elongated construction element comprising a composite material of a thermoplastic synthetic material and a mass of wood particles or other, cellulose containing particles, as well as embedded continuous longitudinal reinforcement elements.

31. The elongated construction element according to Claim 30, wherein said mass is present in an amount of at least 50 % by weight.

32. The elongated construction element according to Claim 30, wherein said mass is present in an amount of at least 50 – 80 % by weight.

33. The elongated construction element according to Claim 30, wherein said mass is present in an amount of at least 70 – 80 % by weight.

34. The elongated construction element according to Claim 30, wherein the element has an E-modulus of more than approximately 6000 Mpa.

35. The elongated construction element according to Claim 30, wherein the element has an E-modulus of approximately 6000-12000 Mpa.

36. The elongated construction element according to Claim 30, wherein the element has an E-modulus of approximately 7000-9000 Mpa.

37. The elongated construction element according to Claim 30, made of nailable or screwable material.

38. The elongated construction element according to Claim 34, made of nailable or screwable material.

39. The elongated construction element according to Claim 30, designed as a tubular profile.

40. The elongated construction element according to Claim 30, designed as a multiple tubular profile.

41. The method according to Claim 2, wherein the cooling takes place in a downstream section of the shaping die.

42. The method according to Claim 41, wherein further cooling takes place in a tank spaced downstream of the shaping die.